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# PIONEER HYBRIDS

FOR PENNSYLVANIA AND MARYLAND

1940 PLANTING

★ MAY 1 1940 ★  
U. S. Department of Agriculture

# PIONEER ..... First Commercial

● The Pioneer Hi-Bred Corn Company, which traces directly back to the pioneers of hybrid corn who started their breeding work in 1913, devotes its resources to the breeding, production and marketing of practical corn hybrids which can be depended upon to make a good yield, stand up under adverse weather, and mature properly.

Pioneer follows five important steps in carrying out this program: first, sound corn breeding; second, rigid performance testing of all new hybrids; third, thorough detasseling; fourth, careful processing; and, fifth, direct-to-farmer marketing.

**SOUND CORN BREEDING**—Pioneer corn breeders practice sound, time-tested breeding principles. They work with the cream of inbred strains . . . for, besides experimenting with their own superior inbred lines, which are increased in number year after year, they have access to all inbreds released by State Experiment Stations and the U. S. Department of Agriculture.

Pioneer corn breeders maintain the purity of these inbred varieties and, with them, carry on an unceasing experiment to develop better, more practical hybrids.

About one thousand new experimental hybrids are produced each year, very few of which ever become commercial hybrids. This year, the breeding program required over 350,000 individual hand-pollinations.

Through extensive research and superior corn breeding, Pioneer customers get hybrids that stand up against bad weather conditions; hybrids that hold their ears well; hybrids that are adapted to both hand and mechanical picking; and hybrids that produce a good crop of ripe, deep kernel, small cob ears which generally overrun crib measurements when shelled.

**PERFORMANCE TESTING**—Each experimental hybrid which shows outstanding qualities undergoes a performance test. Before Pioneer corn breeders give it a variety number and produce it for commercial growing, the new hybrid must prove by actual field production its ability to withstand nature's severest planting and growing hazards . . . cold, wet spring weather; wet seasons; drought conditions; wind storms . . . and it must mature.



- MAKING A HAND-POLLINATION
- TESTING FOR YIELD PERFORMANCE
- DETASSELING SEED FIELDS



# Producer of Hybrid Seed Corn

**THOROUGH DETASSELING**—Every Pioneer seed field is grown under the Company's supervision . . . each field is isolated according to state regulations, and detasseled from 14 to 20 times. Experienced supervisors direct the hundreds of men who detassel these Pioneer seed fields. Only thorough detasseling work keeps the hybrid crosses pure. Pure hybrid crosses mean better seed and bigger crops for the corn grower.

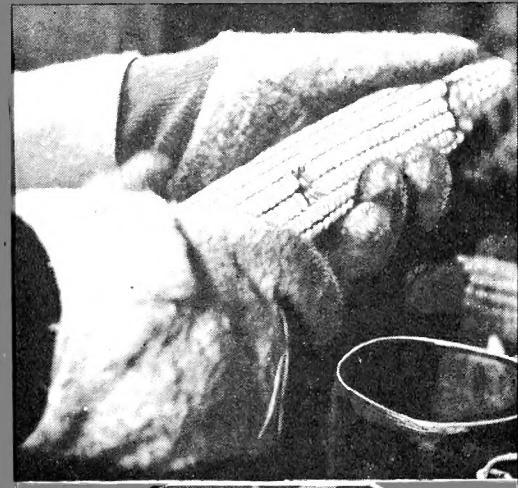
**CAREFUL PROCESSING**—Pioneer hybrid seed is picked before the first damaging freeze occurs, then processed with efficient equipment and improved methods many of which are used only by Pioneer. Every phase of processing . . . sorting, drying, shelling, grading, treating, and sacking . . . is carried on in adequately equipped plants which are operated by trained men. The experience of years goes into every sack. Properly processed, uniformly graded hybrid seed makes planting easier, and produces a good, even stand of healthy corn.

All Pioneer hybrid seed corn is yellow in color; dried to 12% moisture content; shelled; graded into uniform kernel sizes; treated with mercury dust; carefully tested for germination; sacked and sealed in trade-marked bushel bags that are stamped with specific hybrid variety numbers; and ready for planting.

**DIRECT-TO-FARMER MARKETING**—Pioneer hybrid seed is marketed directly to farmers through representatives who are, almost without exception, farmers themselves.

Practical farmers are picked to represent Pioneer because they know and share the same corn problems that their customers meet. They raise Pioneer themselves and are able to recommend, from first-hand experience, the hybrids best suited for their neighborhoods. Furthermore, they live and farm close to their customers and are always nearby to offer advice and perform personal services.

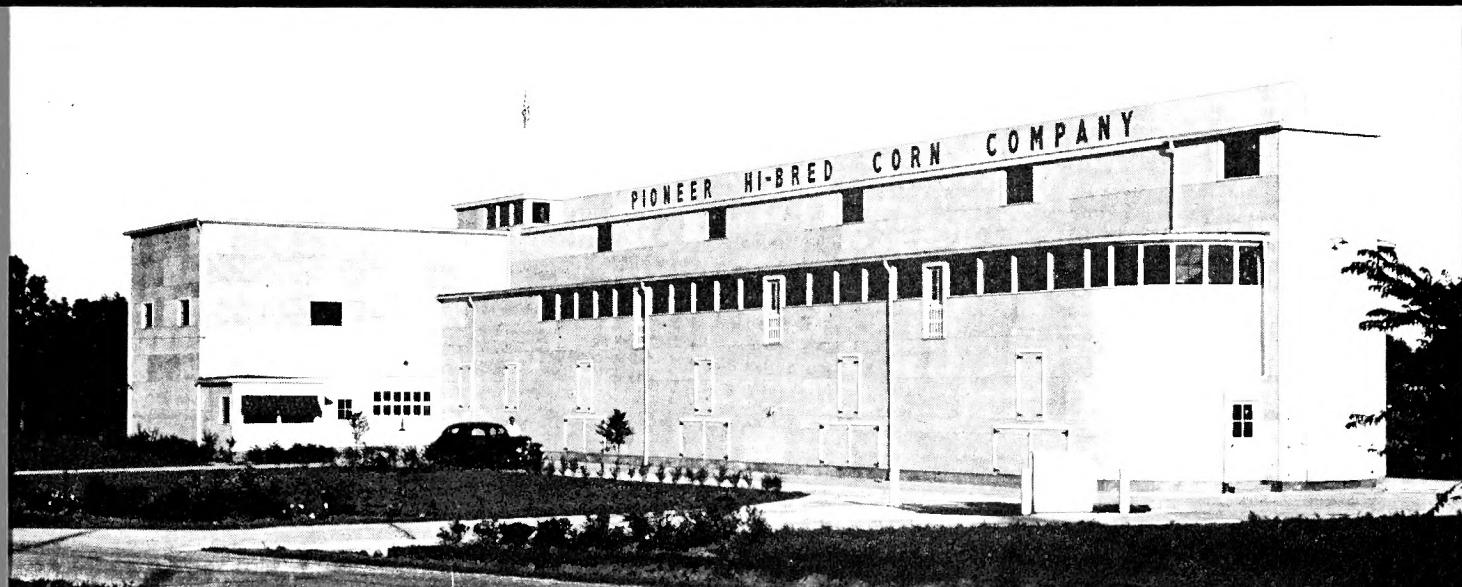
**THOUSANDS CHOOSE PIONEER**—Thousands of farmers throughout the cornbelt have discovered the consistent, dependable crops that Pioneer hybrids give. For this reason, Pioneer users have increased from a mere handful in 1926 to many thousands in 1939. These cornbelt farmers demand Pioneer because they want to pocket extra dollars by planting hybrid corn that is bred and processed for performance . . . moreover, they want a corn whose record is based not on one test or one year's results, but on the average of many years' performance under practical farm conditions.



- HAND SORTING INDIVIDUAL EARS
- A PIONEER REPRESENTATIVE
- ONE OF THE MANY PIONEER USERS



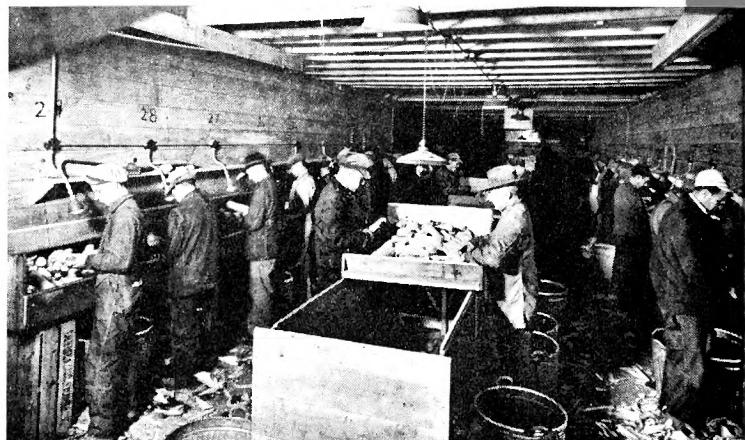
# Pioneer Corn Breeding and Processing



• ONE OF THE FIFTEEN PIONEER PROCESSING PLANTS



• Hand pollinating with pollen gun



• PIONEER seed is carefully hand sorted ear by ear. Only good ears are saved. Damaged corn is discarded.



• Breeding work at the Herndon, Va., plot



PIONEER

# PIONEER HYBRID CORN ON THE FARM



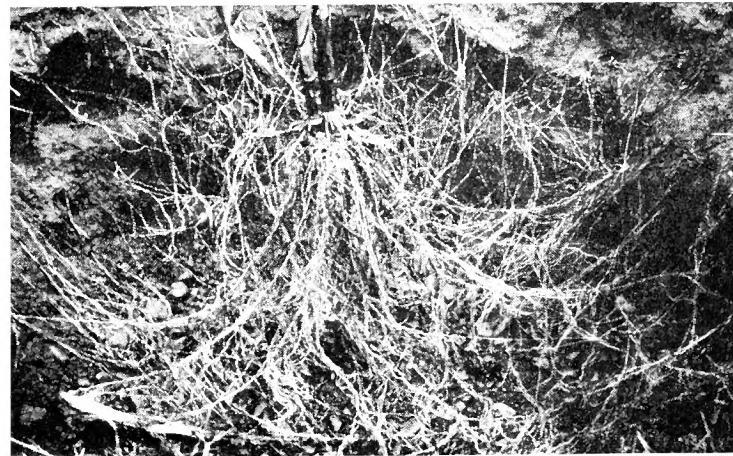
● Pioneer's uniform kernel sizes give an accurate drop



● A good stand is the first essential of a profitable crop



● Healthy green corn resists drought and stalk breaking



● Heavily rooted Pioneer corn resists "up-rooting"



● Pioneer hybrid ears . . . ripe, solid, and uniform



PIONEER

# EASTERN CORNBELT BREEDING STATION

The Pioneer corn breeding station for the eastern cornbelt is located near Herndon, Virginia, on the banks of the Potomac, not far from the southern border of Pennsylvania. Here, Pioneer corn breeders are at work producing inbreds and making experimental hybrid crosses from selected open-pollinated varieties grown in Pennsylvania and other eastern states.

This experimental work for the eastern cornbelt was started in 1937. At that time, a few samples of Pioneer hybrid seed were distributed in Lancaster county, Pennsylvania. The following year, 1938, 42 Lancaster county farmers who had planted the hybrid samples, or had seen the crop produced from

them, planted Pioneer seed. So well satisfied with the increase in yield and standing ability of their Pioneer hybrid corn were these Lancaster county farmers that their enthusiasm spread to York, Chester, Adams, Berks, and other surrounding counties. In 1939, Pioneer hybrid corn was planted on 1,317 Pennsylvania farms.

To supplement the breeding work at Herndon, two large hand-planted Pioneer performance test plots were located in Lancaster county, Pennsylvania, in 1939. Yield, standing ability, maturity, damaged grain, and dropped ears are carefully checked in these plots to determine which hybrids are best adapted for Pennsylvania and Maryland.

## PIONEER HYBRID MATURITY

Pioneer hybrids recommended for southeastern Pennsylvania are classified under three groups: (1) early maturing, (2) medium maturing, and (3) late maturing. These groupings are made to meet; first, climatic conditions; second, various soil types and conditions; third, date of planting; and, fourth, personal demands of the farmer.

The medium maturing hybrids, Pioneer 307, 317, 318A, and 331, have about the same maturity as the Lancaster Sure Crop open-pollinated corn which was originated in this area.

The early maturing hybrids, Pioneer 314 and 330, mature about six or seven days earlier than the medium maturing group, and the late maturing hybrids, Pioneer 313 and 332, mature about five to seven days later than the medium maturing group.

The early maturing hybrids, Pioneer 314 and 330,

should be used for late planting and for slow soils if planted around May 15th-25th.

Under average climate and average soil fertility, any hybrid in the medium maturing group, Pioneer 307, 317, 318A, and 331, will take full advantage of the entire growing season and mature properly before the fodder cutting and silo filling seasons if planted by the middle of May.

The late maturing hybrids, Pioneer 313 and 332, are recommended for rich or fast soils; and for early planting on soils of average to high fertility. These should yield maximum tonnage of silage per acre.

The above recommendations are based on average temperature and rainfall for southeastern Pennsylvania and northern Maryland. In abnormal seasons, deficiency of rainfall and high or low temperatures may vary the maturity of corn considerably.



PIONEER

# RELATIVE RECORDS OF PIONEER HYBRIDS

Pioneer No.	Years Tested	Yield % 307	Moisture % 307	Ear Height % 307	Root Lodging % 307	Stalks Standing % 307
314	5	97	95	99	100	98
330	1	99	96	56	87	113
317	4	98	98	95	101	102
331	2	96	98	92	90	106
307	4	100	100	100	100	100
318-A	1	97	100	83	114	98
O.P.	6	75	100	102	167	91
313	2	102	109	105	118	98
332	1	109	111	119	114	100

## IMPORTANT

The figures under "Yield", "Moisture", "Ear Height", "Root Lodging", and "Stalks Standing", are given in percentages of Pioneer 307. This hybrid is assumed to be 100%. Under "Yield" and "Stalks Standing", those hybrids whose percentages are higher than 100% have a higher yield record and have more standing stalks than Pioneer 307.

Under "Moisture", those hybrids above 100% are later maturing than Pioneer 307. Under "Ear Height", and "Root Lodging", those hybrids below 100% have a lower ear height and less root lodging than Pioneer 307.

## DESCRIPTION OF EACH HYBRID

### Pioneer 330 . . .

Extremely uniform, rough eared hybrid; high yielding ability; exceptionally strong roots throughout season; and very stiff stalks in the fall; may "stalk break" some in mid-season; excellent smut resistance; medium size, deep grained, low hanging ears with long husks; good drought, and ear dropping resistance; especially well adapted for hand and mechanical picking.

### Pioneer 314 . . .

Large eared variety; quick drying, high yielding hybrid; high shelling percentage; good feeding corn; satisfactory for both hand and machine picking; medium dented kernels; excellent ear dropping resistance; strong roots and stiff stalks; susceptible to leaf smut; resistant to ear smut; good drought resistance; medium ear height and medium length husks.

### Pioneer 307 . . .

General purpose hybrid; very high yielding record; adapted to most soils; good feeding corn; suitable for both hand and machine picking; small cobs and deep kernels; abundant foliage for silage and fodder; excellent resistance against lodging, drought, and ear dropping; good resistance against smut; medium dented kernels on ears with medium long husks; medium but not very uniform ear height.

### Pioneer 317 . . .

Large, heavy eared hybrid; medium low ear height; satisfactory yield record; equally suitable for hand and mechanical picking;

excellent standing ability very sturdy roots and hardy stalks; excellent smut and drought resistance; good ear dropping resistance; medium dented kernels; long husks.

### Pioneer 331 . . .

Large, moderately rough ears with long husks; low ear height; excellent smut and ear dropping resistance; especially strong roots and very stiff stalks; good drought resistance.

### Pioneer 318-A . . .

Large ears with long husks; medium dented kernels; low ear height; excellent ear dropping resistance; fairly strong roots and stiff stalks; good smut and drought resistance; excellent for silage corn.

### Pioneer 313 . . .

Dark green, dressy looking hybrid; large, showy ears of very good quality corn; medium dented kernels; stiff stalks and fairly strong roots; excellent smut, drought, and ear dropping resistance; ears slightly high but very uniform; long husks.

### Pioneer 332 . . .

A high yielding, late maturing corn; large ears with long husks; medium dented kernels; very stiff stalks and fairly strong roots; excellent ear dropping resistance; good resistance against smut, and drought; ear height little above average.



# Pioneer Was First to Offer A Replanting Agreement

## BANNER TROPHY



- Pioneer won the Banner Trophy in 1938.
- Pioneer won the Banner Trophy in 1937.
- Pioneer has won the Banner Trophy twice in the last two years when hybrid competition has been the keenest.
- Pioneer has won the Banner Trophy 9 times in 14 years.
- Pioneer is the only commercial producer of hybrid seed corn that ever won the Banner Trophy.

### REPLANTING AGREEMENT

If, because of cutworms, floods or ANY other reason the stand of corn upon any field planted with PIONEER corn shall be so impaired or diminished that the customer discs up and replants it to corn, we will furnish him free of any charge except transportation costs, a quantity of PIONEER seed equal to that required for such planting. To take advantage of this benefit all the customer needs to do is to notify in writing the Company or its sales representative through whom the seed was purchased in time to permit inspection of the field before it is disced up.

If we have no seed of suitable maturity available for replanting, we reserve the right to furnish an equal amount of PIONEER seed FREE for 1941 planting.

**PIONEER HI-BRED CORN COMPANY**

Des Moines, Iowa



## PIONEER HI-BRED CORN COMPANY

114 Eleventh Street, Des Moines, Iowa

FOR PRICE AND ADDITIONAL INFORMATION WRITE TO ABOVE ADDRESS  
OR SEE YOUR LOCAL PIONEER REPRESENTATIVE